

19980719.ba v02\_n135.bam.980719

>From ???@??? Mon Jul 20 03:19:19 1998  
Message-Id: <199807192259.RAA18852@sco.theporch.com>  
Date: Sun, 19 Jul 1998 17:58:31 CDT  
Subject: BOATANCHORS digest 2135

BOATANCHORS Digest 2135

Topics covered in this issue include:

- 1) Ameco 6m/2m AM transmitter fs  
by gcr2@po.CWRU.Edu (George C. Rybicki)
- 2) Heath SB604 Speaker FS/trade  
by gcr2@po.CWRU.Edu (George C. Rybicki)
- 3) BC-1335 for sale  
by "Joseph W. Pinner" <kc5ijd@sprintmail.com>
- 4) Help with Gates Dynamote  
by "Joseph W. Pinner" <kc5ijd@sprintmail.com>
- 5) Re: Unusual Xtal  
by gwoods@albany.net (Gary Woods)
- 6) More Help Needed  
by "Lloyd A. Scott, Jr." <wpul1130@concentric.net>
- 7) Special event BA stations  
by Sandy W5TVW <ebjr@worldnet.att.net>
- 8) Crystals.....PRICE REDUCED!!  
by "Robert S. Ross" <radiorob@serix.com>
- 9) Re: Special event BA stations  
by "Grant Youngman" <nq5t@gte.net>
- 10) INSTRUCTOGRAPH OWNERS  
by "David L. Stinson" <arc5@ix.netcom.com>
- 11) FRRL hamfest  
by Bob Roehrig <broehrig@admin.aurora.edu>
- 12) High voltage measurement techniques  
by "Benjamin D. Hall" <kd5byb@WT.NET>
- 13) Lancaster Bomber switch boxes  
by BEN NOCK <G4BXD@compuserve.com>
- 14) German WWII keys  
by BEN NOCK <G4BXD@compuserve.com>
- 15) Re: High voltage measurement techniques  
by Mike <ac5p@ionet.net>
- 16) Re: High voltage measurement techniques  
by ail0@lehigh.edu (ARTHUR I. LARKY)
- 17) The Mysterious Work Stuff Has Pups  
by "Roberta J. Barmore" <rbarmore@indy.net>

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Message-Id: <199807191150.HAA11231@piglet.INS.CWRU.Edu>

Date: Sun, 19 Jul 1998 07:50:49 -0400 (EDT)  
From: gcr2@po.CWRU.Edu (George C. Rybicki)  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Ameco 6m/2m AM transmitter fs

Two ameco tx-62 am/cw transmitters fs. Both are in GC with perfect panels but the cases have a little surface rust. Both were tested and have 40-50w output on 6M. I have manual copies. \$50 +sh from 44286. One matching Ameco VF0-621 GC \$50 + sh (not sold separately until tx's are gone) 73 George

-----  
Message-Id: <199807191153.HAA11405@piglet.INS.CWRU.Edu>  
Date: Sun, 19 Jul 1998 07:53:27 -0400 (EDT)  
From: gcr2@po.CWRU.Edu (George C. Rybicki)  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Heath SB604 Speaker FS/trade

Heath SB-604 speaker with manual. VGC but has one 1/4 inch hole in right rear corner. Trade for Drake MS-4, Hallicrafters speaker for sx-28, military rack speakers for sp600/r390 or just plain cash. Thanks George

-----  
Message-Id: <199807191327.GAA13687@magpie.prod.itd.earthlink.net>  
Subject: BC-1335 for sale  
Date: Sun, 19 Jul 1998 08:38:10 -0000  
From: "Joseph W. Pinner" <kc5ijd@sprintmail.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="US-ASCII"

I have a nice BC-1335 for sale. In really good condition, but is missing the phone and mike jack covers and several of the mounting clamps. I just found one new in the box and I do not need two.

\$ 65 plus shipping.

73

Joseph W Pinner  
Lafayette, LA  
KC5IJD  
EMail: kc5ijd@sprintmail.com <== NOTE NEW ADDRESS

-----  
Message-Id: <199807191327.GAA13700@magpie.prod.itd.earthlink.net>  
Subject: Help with Gates Dynamote  
Date: Sun, 19 Jul 1998 08:38:14 -0000  
From: "Joseph W. Pinner" <kc5ijd@sprintmail.com>

To: Old Tube Radios <boatanchors@theporch.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="US-ASCII"

I have a Gates Dynamote which I would like to put back in operating condition. To do so, I need some diagrams and any other data of the unit that I can find.

I know that there are a number of variations of the Dynamotes. The one that I have comes in a wooden transit case - the mixer itself is on the left side and the power supply fits in the right. This model is rectangular in shape, with three inputs.

Any help will be greatly appreciated.

73

Joseph W Pinner  
Lafayette, LA  
KC5IJD  
EMail: kc5ijd@sprintmail.com <== NOTE NEW ADDRESS

-----  
From: gwoods@albany.net (Gary Woods)  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Unusual Xtal  
Date: Sun, 19 Jul 1998 14:23:07 GMT  
Message-ID: <35c0ffcb.143288133@mail.albany.net>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

On Sat, 18 Jul 1998 22:28:47 +0100, you wrote:

>BAers,  
> Today at a flea market I picked up a sack of xtals. (I'm a sucker for  
>an oddball or offbrand xtal.) In the sack was a xtal constructed in a  
>7-pin tube envelope. The markings on the glass are:  
>"Midland 828  
>3579.545 KC 3-63

Can't tell you what the application was, but I sure know the freq:  
That's "color burst;" the subcarrier frequency used to fit color in a  
channel only meant for monochrome video [U.S. standards; YMMV]  
<delete much math on how it works, with arm-waving, etc.>  
Those are sometimes used as the timebase for touch-tone encoder  
<off-topic> chips </off-topic> as well.  
Ancient history:

Legend has it that a fellow in NY City was working 80-meter CW with a KW not far from NBC's network center when the first color transmissions were made with not-that-well-shielded encoders. Managed to cause coast-to-coast TVI, but not for long. At that time, most TV engineers could copy Morse, so they got him to QSY pretty quickly.

--

Gary Woods O- K2AHC Public key at [www.albany.net/~gwoods](http://www.albany.net/~gwoods), or get 0x1D64A93D via keyserver

[gwoods@albany.net](mailto:gwoods@albany.net) [gwoods@wrgb.com](mailto:gwoods@wrgb.com)

fingerprint = E2 6F 50 93 7B C7 F3 CA 1F 8B 3C C0 B0 28 68 0B

-----  
Message-ID: <35B20F67.66EC59AF@concentric.net>

Date: Sun, 19 Jul 1998 08:23:19 -0700

From: "Lloyd A. Scott, Jr." <[wpul1130@concentric.net](mailto:wpul1130@concentric.net)>

MIME-Version: 1.0

To: Old Tube Radios <[boatanchors@theporch.com](mailto:boatanchors@theporch.com)>

Subject: More Help Needed

Content-Type: multipart/alternative; boundary="-----  
A44A7CF5AB4852C81278CDAD"

-----A44A7CF5AB4852C81278CDAD

Content-Type: text/plain; charset=us-ascii

Content-Transfer-Encoding: 7bit

Greetings All: I am closing a deal for a 1945 Raytheon AM 250 watt transmitter. One side panel has been removed revealing a shielded cabinet which I can not see into until the transmitter is moved. There is oil or something coming out of the shielded portion and dripping down the cabinet. What is it, and how do I clean it up? Many thanks in advance

Lloyd

-----A44A7CF5AB4852C81278CDAD

Content-Type: text/html; charset=us-ascii

Content-Transfer-Encoding: 7bit

<HTML>

<FONT SIZE=+1>Greetings All: I am closing a deal for a 1945 Raytheon AM 250 watt</FONT>

<BR><FONT SIZE=+1>transmitter. One side panel has been removed revealing a shielded</FONT>

<BR><FONT SIZE=+1>cabinet which I can not see into until the transmitter is moved. There</FONT>

<BR><FONT SIZE=+1>is oil or something coming out of the shielded portion

and dripping</FONT>  
<BR><FONT SIZE=+1>down the cabinet. What is it, and how do I clean it up?  
Many thanks in</FONT>  
<BR><FONT SIZE=+1>advance</FONT>  
<BR><FONT SIZE=+1>Lloyd</FONT></HTML>

-----A44A7CF5AB4852C81278CDAD--

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Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Sandy W5TVW <ebjr@worldnet.att.net>  
Subject: Special event BA stations  
Message-Id: <19980719153619.KVVP7061@LOCALNAME>  
Date: Sun, 19 Jul 1998 15:36:19 +0000

Does anyone know what frequencies the shipboard boatanchor stations  
are special eventing on today? (CW or SSB)

73,  
Sandy W5TVW

-----  
Date: Sun, 19 Jul 1998 11:44:14 -0400  
Message-Id: <3.0.16.19980719114039.28bfb726@serix.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
From: "Robert S. Ross" <radiorob@serix.com>  
Subject: Crystals.....PRICE REDUCED!!  
Cc: boatanchors@listserv.tempe.gov  
Mime-Version: 1.0  
Content-Type: text/plain; charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

Hello Guys:

OK....I guess these were priced too high....so lets reduce the price by  
50 %....and see if anyone needs these at that price.....gotta be someone  
who can use these!!

I have a large Bag of Crystals.....34 Crystals in Total, for Sale.

These are mostly larger sized crystals..(Larger than FT-243 Style). There  
is a Good mixture of Ham Freqs and Utility Freqs. Ham freqs are in the  
40/80 Meter range mostly.

Various manufacturers such as.....Snelgrove, PR Crystals, Texas, Bliley,  
RCA, ARC, Rogers Majestic, Signal Corps, Bendix, Round Encased Crystals,

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> Does anyone know what frequencies the shipboard boatanchor
> stations
> are special eventing on today? (CW or SSB)
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The complete schedule is at <http://www.thebizlink.com/am/events.htm>

Grant

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Grant Youngman / NQ5T

nq5t@gte.net  
BA pics at <http://home1.gte.net/nq5t>  
Double Oak, TX -- nr Dallas

-----  
Message-ID: <35B2180E.5EF6@ix.netcom.com>  
Date: Sun, 19 Jul 1998 11:00:15 -0500  
From: "David L. Stinson" <arc5@ix.netcom.com>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: INSTRUCTOGRAPH OWNERS  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

If you own an Instructograph and need  
a blank take-up reel, please email me.  
I found one and will send it to whomever  
needs it.  
Priority to people missing reels, of course.  
Multiple requests decided by lottery.

73 DE Dave AB5S  
arc5@ix.netcom.com

-----  
Date: Sun, 19 Jul 1998 12:59:11 -0500 (CDT)  
From: Bob Roehrig <broehrig@admin.aurora.edu>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: FRRL hamfest  
Message-ID: <Pine.ULT.3.96.980719125151.22544B-1000000@admin.aurora.edu>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

The annual Fox River Radio League hamfest was held at the Waubensee Community College in Sufar Grove, IL today. Was partly sunny and hot. Lots of tubes (I think there were two vendors) and many Hallicrafters sitting out. I think I counted 4 or 5 S-38's, a SX-71, a Super Skyrider, a very clean S-77. A lot of the BA stuff was pretty grubby and not really worth a second look. I chuckled at a S-38 that had Heath knobs on it - talk about UGLY! There were a couple of nice telegraph sounders at

\$50 each which I passed up. I came home with a half dozen 5 inch rack panels and a tuning knob for my BC-348. That plus the ticket cost me all of \$10.00. Lots of good conversation with old friends.

"Nostalgia is a thing of the past"  
E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI  
CIS: Data / Telecom Aurora University, Aurora, IL  
630-844-4898 Fax 630-844-5530

-----  
Message-Id: <3.0.32.19980719142457.007640f0@mail.wt.net>  
Date: Sun, 19 Jul 1998 14:25:27 -0500  
To: Old Tube Radios <boatanchors@theporch.com>  
From: "Benjamin D. Hall" <kd5byb@WT.NET>  
Subject: High voltage measurement techniques  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Greetings everyone...

Well, after attending the Texas City hamfest yesterday, I find myself in the mood to do some work on the BA's. I really should be buying groceries, but who needs to eat when there are BA's that need attention? Or maybe I should market all this as the BA diet? Hee hee.

Anyways, I've been working on a power supply for my Panoramic SA-8b panadaptor. It is a really simple supply: 265 at 125 ma, -1800 at 3 ma, plus a whole bunch of filament voltages... Even though I found a PS-8b that the unit uses, I find myself desiring to finish the homebrew supply that I started building. Everything is assembled, minus a couple resistors here and there.

So, I'm planning how I want to test it. Measuring the 265 volts is simple, just use the old HP. But, minus any sort of high voltage meter, does one measure something in the neighborhood of 2kvdc? I'm thinking "precision on a budget:"

Build up a peice of lexan with 10 X 10 meg resistors in series, and hooking this across the 2kvdc supply. 100 meg will not draw the supply down, and the 10 resistors in series will provide more than adequate margin on the voltage rating of the resistors (350 volts each). I then measure the voltage across one of the 10 resistors, multiplying by 10 to get my voltage.

\*BUT\* The VTVM has resistance too, and if I remember correctly, the HP 412A is around 10 meg? 11 meg? So it will affect the reading. So I'll actually be reading voltage across 5 meg, right?

Just curious to know how far off my thoughts are... BTW - how do those



"high voltage probes" they make for VTVM's work?

Thanks and 73,  
Ben

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Benjamin D. Hall, KD5BYB, Engine and radio collector / operator.  
Located in Houston, Texas, USA.  
e-mail: kd5byb@WT.net, web: \*\*\*down for refurbishment\*\*\*  
"An ye harm none, do what ye will."

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Date: Sun, 19 Jul 1998 16:19:59 -0400  
From: BEN NOCK <G4BXD@compuserve.com>  
Subject: Lancaster Bomber switch boxes  
To: Old Tube Radios <boatanchors@theporch.com>  
Message-ID: <199807191620\_MC2-5395-5543@compuserve.com>  
MIME-Version: 1.0  
Content-Transfer-Encoding: quoted-printable  
Content-Type: text/plain; charset=ISO-8859-1  
Content-Disposition: inline

I have a couple of WWII switch and morse key boxes as used  
in Lancaster Bombers etc, to control and key the upper and lower nav  
lights.  
The boxes have several switches with all the connections brought out at the=  
base so the =  
box could be used to turn rigs on or off, and the two morse keys could be=  
used  
on two rigs. Would make a very interesting talking point in any shack.  
They are first class, and have the canvas cover that goes over the front  
when not in use. =

1 NIB, unopened.. 35 Pound  
1, new, no box, ... 30 Pound.

(plus postage)

cheers, Ben.

-----

Date: Sun, 19 Jul 1998 16:20:01 -0400  
From: BEN NOCK <G4BXD@compuserve.com>  
Subject: German WWII keys  
To: Old Tube Radios <boatanchors@theporch.com>

Message-ID: <199807191620\_MC2-5395-5544@compuserve.com>  
MIME-Version: 1.0  
Content-Transfer-Encoding: quoted-printable  
Content-Type: text/plain; charset=ISO-8859-1  
Content-Disposition: inline

I have now secured another couple so once again I can offer you a WWII German Army key, brown bakerlite (or the German equiv) in real nice condition, original lead and plug (no chaffing onleads) and the key has the eagle and swastika embossed on it. =

Price 45 Pound, including postage.

I will need either: 45 UK Pounds in notes, a bank draft in Sterling drawn on a bank with a UK branch or I can take US\$75 in notes.

cheers, Ben.

-----  
Date: Sun, 19 Jul 1998 15:59:52 -0500 (CDT)  
Message-Id: <199807192059.PAA01865@mail.ionet.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Mike <ac5p@ionet.net>  
Subject: Re: High voltage measurement techniques

>Just curious to know how far off my thoughts are... BTW - how do those  
>"high voltage probes" they make for VTVM's work?

Not sure about the HV probes for VTVM's, but for HV power line phasing sticks it is a simple 0-1ma meter with the multiplying resistors inside joints that screw onto the end of the probes. The probe resistance value is 1000 ohms per volt or 1 meg per kv. So with a 10 megohm probe, you would read 0-10Kv, with 5 megs, 0-5Kv, etc. The scheme is as accurate as you can make the resistor probe and your 0-1 ma meter.

Mike

-----  
Message-Id: <199807192123.RAA27402@ns1-1.CC.Lehigh.EDU>  
Date: Sun, 19 Jul 1998 17:23:10 EDT  
From: ail0@lehigh.edu (ARTHUR I. LARKY)  
Subject: Re: High voltage measurement techniques  
To: Old Tube Radios <boatanchors@theporch.com>

BEN HALL writes:

>So, I'm planning how I want to test it. Measuring the 265 volts is simple,  
>just use the old HP. But, minus any sort of high voltage meter, does one  
>measure something in the neighborhood of 2kvdc? I'm thinking "precision on  
>a budget:"

>

>Build up a peice of lexan with 10 X 10 meg resistors in series, and hooking  
>this across the 2kvdc supply. 100 meg will not draw the supply down, and  
>the 10 resistors in series will provide more than adequate margin on the  
>voltage rating of the resistors (350 volts each). I then measure the  
>voltage across one of the 10 resistors, multiplying by 10 to get my voltage.

>

>\*BUT\* The VTVM has resistance too, and if I remember correctly, the HP  
>412A is around 10 meg? 11 meg? So it will affect the reading. So I'll  
>actually be reading voltage across 5 meg, right? SOMETHING like that.

>Benjamin D. Hall, KD5BYB, Engine and radio collector / operator.

Keep the lexan and the resistors, but put the resistors in SERIES with the hp probe. Then find out what the input resistance of the hp probe is at dc and you have a simple divider. For example: if the hp is 10 meg, use 9 10 megs in series with it and the scale factor is 10:1. It would pay to clamp the hp probe to the lexan also, set it up, turn it on, and then turn on the power supply. Keep hands, feet, nose, etc. away from everything including the meter case. Of course, the case should be grounded firmly as should the power supply chassis. That way, leakage voltages will not get to you. Be sure to turn off the power supply first and then give time for the 100 meg bleeder (the probe) to draw it down before you do something brave like touching anything. Start at the highest range of the meter. Before you do anything at all, make sure all the resistors are well connected electrically. Read each one to make sure that they really are 10 megs. If one of them shorts, you have more voltage on the probe. You may want to use someone else's meter first (grin).

Be careful, the life you save will be your own!

Better still, find a high voltage probe somewhere and borrow it.

Don't blame me if you get yourself zapped - you're the one building the divider.

On the other hand, your original idea will work also and has the advantage that you have less risk of getting zapped since the hp probe has the external 10meg resistor across it. The problem with either method is that, if the bottom of the resistor chain comes loose so your probe effectively is in SERIES with the resistor chain, then no matter which method you are using, you have a false sense of security in that you think that the divider chain is limiting the voltage at the probe. Depending upon what comes loose, it may not be doing the limiting. Also keep in mind that the insulation

on the probe leads is not intended for that kind of voltage. If sparks start to fly, restrain yourself, don't touch anything. Get a big long stick and turn off the power to the supply. Don't touch the meter until you let everything cool down. Put a shorting wire on the end of the stick so you can short out the supply after it drains down. I assume that you will install the resistor string as a bleeder in the final version of the supply.

Remember, becoming an SK is not as much fun as it sounds!

Art

-----  
Date: Sun, 19 Jul 1998 17:59:36 -0500 (EST)  
From: "Roberta J. Barmore" <rbarmore@indy.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: The Mysterious Work Stuff Has Pups  
Message-ID: <Pine.SUN.3.96.980719163057.22799A-1000000@indy2>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

(Alternate "Subject:" line: "Is we SOUP yet?")

Greetings, firebottle fans!

Well, I stand before you humbled by the universe and Murphy's role in it. In our last exciting chapter, the electricians were pondering installation of a nice, new 500A circuit breaker in the 480VAC, 1200A three-phase breaker box, and had removed the gutter covers (they go down each side and hide where the wires connect to the breakers) to have a look.

That didn't help them much, so right after lunchtime Thursday, they removed the rest of the "dead front" as well. This is a nifty metal panel that covers the center of the front panel of the big breaker box, with square holes in it through which the levers of the breakers protrude. In places where no breakers are installed, it also hides the big silver-plated copper busbars, about 1/4" thick and just over a couple inches wide. It sits about 1/4" clear of the actual fronts of the breakers, on rails supported by some brackets from the back of the box.

Discovery One: the way the breakers install, you really don't dare install 'em hot--there's a kind of busbar "Z" bracket (horizontal-vertical-horizontal, if the breaker is laying face down in front of you) for each phase that extends from the main busses, over, up and over to get clamped to the back of the breaker with a husky bolt from the front and a pem-nut forced into the Z-bracket from the back. You can't even \*see\* the darned things when the breaker is installed!

And that leads us to Discovery Two: in looking to see just how the breakers mount, Our Heros put down an insulating mat and peer up at the bottom set of breakers. "H'mm," sez the Master Electrician, "An awkward set-up." And then he gets a bit green around the gills and says a bad

word while backing out, and has the Journeyman and the 'Prentice have a very quick look. They go a little pale, too, and the Master wonders if maybe I'd better come in and talk. (The main electrical room is right off my workshop).

Now, the bottom set of breakers are 400A jobs, about 4 modern ARRL Handbooks in size and weight, and they feed a pair of 480V:208V stepdown transformers that outweigh your Chevy and which just happen to be providing the juice for the big transmitter I get paid to try to keep running. The two breakers sit back-to-back (just like in your breaker box at home, but a whole lot bigger), sharing a common set of double-wide Z-brackets, through which they sip juice from the main busses.

And what Our Heros have seen, and now show to me, is a cheery red glow comin' from at least one Z-bracket, right behind the breakers! Well, it would be cheery in many another context--here, it does not look at all nice. The front of the breakers, where a phenolic cover hides the bolts connecting the Z-brackets, is nice and warm, only more so.

We decide as how it would be nice to replace them. Say, like, that night, and no matter if we have to fly the parts in from Patagonia, first-class collect. Lo and behold, our redundant step-down system (only one of the two transformers is running the rig at any one time) does no good at all here--the glowing Z-bracket of busbar is \*shared!\* (A "single point of failure." One does well to avoid these. Grrr--I thought we had).

The glow reflects nicely from the silver-plated main busbars, and all of us make a habit of having a look every so often; along about two p.m., it's looking bigger and \*orange\* to me, with hints of a yellow center...so after pondering the "red, orange, yellow, white, molten" sequence for about five seconds, I drop the transmitter power back a tad. The glow subsides over the next hour, and after making arrangements to have some of our other techs stand watch through the afternoon and evening, I head home to nap.

...Returning at a quarter of one in the morning, the glow has grown to a nice \*wide\* orange band, NE-2 color. Shutdown is at two a.m., so we elect to chance it. (Nervous? Me? Yep.)

Turning off the building is a task which I will not address in detail, save to point out that a dozen ten and 20-ton air conditioners do take some attention to turn off properly, as does reducing the load on the big uninterruptable power supply so it'll hold what must be held. Other quirks must be dealt with as well, like ensuring the station's big generator won't come on and spoil our fun, and explaining to the FAA we'll be turning off the tower lights--the entire process takes about 20-30 minutes. But finally, the Journeyman stands before the 1200A main breaker, I give him the nod, and CLOMP! we stand in the quiet, with only the racket of the little generator running worklights yammering away in the night.

It takes twenty minutes to get the "bad" breakers out, and oh, what a sight! The contacts for the phase that was running hot are blackened; the

Z-bracket for that phase has no silver-plating left, and on the side that was running the rig, the pem-nut is all but gone! The bolt through it is down to about 3/4 of its original diameter--what could cause it to have to carry so much of the current?

The Z-brackets come out next, and close inspection of the breaker has begun to tell the tale: there are barriers between the three input terminals, and they all seem to be cracked and bent. Laying the Z-bracket in position on the breaker, the awful truth is revealed: it's the wrong size! It sits in the contact recess at an angle; the bolt and pem-nut should clamp together an area about 2.5" square, but the contact area with *\*this\** defective piece is more like 1/8" x 2.5", plus the (steel, yeeeeech) bolt. About 190A (on black picture) is trying to get through that little patch of contact--small wonder it was unhappy.

Nasty--and guess what, there are two more (300A) breakers of the same style in the next space up! We have a look, and yes, there it is, same problem. Luckily, the current was lower and there's no sign of heating. Unluckily, we don't happen to have spares handy. So they'll have to go back in for now.

We installed the new breakers and the new Z-brackets (both the Master Electrician and I had insisted on getting *\*all\** the hardware, on the theory that we'd used up our luck already), looked at installing the 500A breaker for the Mysterious Stuff (about which more later, I promise), but had to pass as time was running short.

Brought everything back up, and wonder of wonders, it all worked!

...Just to add to the fun, about halfway through, the apprentice and I went out to refuel and restart the little generator. While she and I were taking turns yanking the rope and flooding it, some lunatic in a twin-prop plane came *\*uncomortably\** close...FAA sez he was plenty high but gee, it sure didn't look that way from the ground! (Had his landing lights on--if I'd seen 'em start to illuminate the tower, I was heading under a workbench and taking the electricians with me; there's no safe place but that seemed the best bet.)

Friday, we ordered replacments for the other damaged breakers, and last night, I got to do it all again--shut down the building, try not to hover over the electricians too much, and then restart. So far, so good, but don't make any sudden noises around me for awhile, please! We even got the new 500A job installed, and count on it, everybody took several close looks at the connections and parts.

We were lucky. Those breakers were messed up from the git-go, about two and a half years ago, and nobody found 'em. I've been running a hand across the breaker panels once a week or so but the dead-front and airspace behind it must have carried away enough heat to not make it noticeable. But that thing could have made a *\*huge\** mess, and would have put us off the air for a good long while in the doing!

Present evidence is the panel was purchased assembled. Since the brackets are hidden by the breakers themselves, it wasn't found on

installation--though the breakers did sit a tiny bit crooked and maybe we should have caught that. It goes to show that you shouldn't take \*anything\* for granted, especially at high power! (Built on a Friday? I dunno--but if the Seimans happens to find the worker that assembled the thing, I'll be having to bite my tongue....)

...And now you know what I've been doing instead of hamming. And people wonder why I stick with lower powers at home! :) (No criticism of others is intended, btw; my operating skills aren't all that sharp, and that's why I've referred to \*my\* running QRO as "adding to the din." A skilled op running high power is a treat--but I'd be more like a little old lady in a Cadillac on the freeway, 40 mph and changing lanes at random....)

73,  
--Bobbi

PS: still working on judging the "contest" from my last installment of As The Dial Turns; so far, there's a couple fellows in the lead! \*Nobody\* knew what a "shady-dog RCA hi-fi record" was--yes, it \*is\* Nipper, but the term "shaded dog" refers specifically to RCA's earlier efforts at serious 33-1/3 stereo records, felt by many audiophiles to be among the best ever pressed. They used a shaded background behind Nipper on the labels for most of these; later efforts, it's just plain red. The label change is simply coincidence, but it's one of the few bits of green-pen audio mysticism with a basis in fact--those recordings really \*are\* a cut above!  
--RJB

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